

be referred to the genus *Helicograpsus*, viz. *H. gracilis*, Hall, sp. ; and it is distinguished by the following characters :—

Fronde compound, consisting of a tubular S-shaped funicle, which gives off two sets of monopronidian branches, one from each of the convex portions of the curve, in the manner described under the genus. The "funicle" itself is very slender, and in some specimens shows traces of a small triangular radicle in its centre. The celluliferous branches are from eight to twelve in number (*i. e.* four to six in each set) in most of our specimens ; but they are as many as thirty-three in an example figured by Hall. The first branches are almost rectangular to the funicle, but the later ones become gradually less so. They are very narrow at their commencement, but widen out till a breadth of $\frac{1}{40}$ to $\frac{1}{30}$ inch may be attained ; and this would doubtless be exceeded in larger specimens. The cellules are from twenty-five to thirty in the space of an inch, inclined to the axis at a small angle, the cell-mouths rectangular to the axis, and running partially across the stipe.

Loc. Common, and tolerably well preserved, in the anthracitic shales of Glenkiln Burn, in Dumfriesshire. Rare in the black slates of Cairn Ryan, Wigtonshire.

III.—*A few words on Euplectella aspergillum, Owen, and its Inhabitants.* By C. SEMPER*.

THE last numbers of the 'Annals of Natural History,' for December 1866 (p. 487) and January 1867 (p. 44), gave us two small memoirs by John Edward Gray upon a Sponge from the Philippines which was known to the travellers Quoy and Gaimard, and more accurately described by Owen, in 1841, under the generic name of *Euplectella*. Apparently this Sponge has hitherto been one of the greatest rarities in our museums ; and it is only within the last few years that a greater number of specimens, derived from the Philippines, have come to Europe. As I believe that I have no unimportant share in this increase of museum treasures, and have had the opportunity of seeing a considerable number of them, both here and in the Philippines, I will venture to make a few remarks upon them. So long as I had only a few claims of priority to make, I thought I might keep silence ; but now, when it appears as

* Translated by W. S. Dallas, F.L.S. &c., from Wiegmann's 'Archiv,' 1867, pp. 84-89.

if the simplest circumstances threatened to become confused by the help of our *savants*, who do not hesitate to support by scientific reasonings the simple fancies of a set of fishermen, I think it is time for me to bring my own observations to light.

Under the name of "regadera"* , these sponges are brought by the fishermen for sale to Cebú, one of the Visaya islands. In the course of several years I myself saw there seven or eight specimens; and, as I was told by a very intelligent mestizo in the town, about twelve to fourteen specimens in all had, up to that time (1864) been sent to Europe. As, however, nearly all these specimens, having been bought by Spaniards, went to Spain, and probably remained for the most part as ornaments in the state rooms of private individuals, we may easily understand how, since the investigations of Owen and Bowerbank, no further details as to these organisms came into the possession of the scientific world. Recently the fishermen of Cebú seem to have discovered the true habitat of the sponge; at least this is indicated by the rapidly increasing number of the specimens of *Euplectella* since my return in the year 1865. This was certainly not the case during my residence. In a dredging voyage which I made in the year 1864 round the neighbouring island of Bohol; and in the channel between Bohol and Cebú I anchored for two days in 120 fathoms, at the spot where the fishermen of S. Nicolas asserted they had found the *Euplectella*. As I fished for them in vain, it seems probable that they had deceived me as well as all other Europeans, so as not to bring down the price of the sponges by betraying the place of their origin—a stratagem which is well known to be employed not only by Malay fishermen. As I was unlucky in my fishing, I purchased a specimen, which, unfortunately, was much bleached and no longer fresh. Subsequently I obtained through a kind friend fourteen specimens, all, with the exception of two, perfectly preserved. Nearly all of these contained the crustacean which I had long known, and the association of which with this sponge was first made known by Gray.

* "Regadera" means "watering-pot." The false spelling ("rigederos") of Messrs. H. Chevalier and Gray reminds me vividly of a time when I endeavoured in vain to teach an English sailor the correct pronunciation of some Spanish names. The Spanish *e* and *a* were constantly pronounced by him as *i* and *e*. Exactly the same orthography seems to have been adopted in the above case. I might venture here to cite a third, and this time a Germanized spelling of the Spanish word "regadera," namely "reidschidiros." By such felicitous changes we may hope by degrees to introduce this denomination again into the Philippines as true Malay. At least, the attempted derivations of the word "Papua" show the possibility of this in an allied case.

As Gray correctly observes, the Spaniards in Cebú and Manilla regard this sponge as a house built for itself by the inhabitant. To judge from Gray's last memoir, this opinion seems now to have been adopted by a French naturalist unknown to me, M. Trimoulet, of Bordeaux. When Gray adds, "The [Spanish?] fishermen's theory has found one *scientific* supporter at least," I should be inclined to regard the word "scientific" as employed only *cum grano salis*. In fact the most superficial knowledge of the structure of the sponge on the one hand, and of the habits of the Crustacea on the other, suffices to prove that this opinion might certainly originate in the brain of a Malay fisherman, but that its *scientific* assertion would be a most startling task, which few would have desire or courage to undertake. It is true one must make discoveries; and if they are accepted and become the fashion only for a short time, this is perhaps sufficient for the attainment of the desired honour. I regard it as superfluous, after the beautiful investigations of Owen and Bowerbank upon this sponge, to describe its intimate structure over again, in order to strengthen the assertion that this French *savant* must and will find himself in error.

And even if Trimoulet's assertion "that it is the nest of a crustacean of the section of the *Isopodes nageurs*" were quite correct, it is true that an Isopod, a true *Æga*, lives in the sponge, but not alone; for even still more frequently we find in it a pair of a pretty Palæmonid, which, unfortunately, I cannot determine generically from the much damaged specimens now before me. If M. Trimoulet's "renseignements" had been a little more complete, he would also have heard from the same Spaniards in Cebú that the "Cuca"* (that is to say, my *Æga spongiophila*) is always found singly, but that, on the contrary, the "Camarones"† (the Palæmonidæ above mentioned) always live in it in pairs—a married couple and the friend of the family! And, according to Trimoulet, it is probable that their united endeavours have succeeded in weaving together the delicate siliceous web of the whole sponge, both without and within. Both forms of crustacea have long been known to me. Of one of them (*Æga spongiophila*) I made a sufficiently careful drawing in Cebú,

* "Cuca" is abbreviated from the Spanish word "cucaracha," by which, in Spain, all kinds of cockroaches and also the Asellini are indicated.

† "Camaron" is the Spanish name for every Palæmonid, both of fresh and salt water. Both denominations furnish a fresh proof of how correctly uneducated and so-called savage people are frequently guided by their sharpened senses.

endeavouring to bring the animal in all positions before some of the larger openings in the terminal disk, as I could not destroy the sponge itself. The two *Palæmonidæ*, on the contrary, were always too much injured, in all the specimens which then came under my inspection, to allow them to be drawn under such difficulties. As I am not at the moment able to prepare drawings of the crustacea, of which I have several specimens now before me, I must content myself for the present with a short description, which I hope to follow speedily with a more accurate one, accompanied by figures.

Æga spongiophila, n. sp.

The head is rounded off in front, and strongly bent downwards. The two eyes are very large, but do not touch each other, leaving the forehead produced into a small point between them; the broad basal joints of the antennæ originate at the sides of the forehead. The first joint of the upper antennæ is nearly quadrangular, twice as broad as the length of the frontal point; the second joint somewhat smaller; the third joint is thin and cylindrical, and reaches to the middle of the eyes; the terminal filament is many-jointed, and does not reach quite to the hind margin of the first thoracic segment. The inferior antennæ commence with two short but broad joints; the three following long and cylindrical joints reach nearly to the end of the inner antennæ; and the small-jointed terminal flagellum goes to the commencement of the abdomen. The epimera of the first seven segments of the body are large and lanceolate. The first segment of the postabdomen is the narrowest, and the penultimate the broadest. The last abdominal segment is straight-margined anteriorly, strongly curved behind. The lamellæ of the abdominal swimming-feet are acutely oval, and do not protrude beyond the hinder margin of the last segment.

The description of the *Palæmonid* I will reserve for the present, as I hope soon to be able to make a better one, from perfect specimens preserved in spirits, than would be possible now from the dried and partially destroyed animals.

In conclusion, I will only make a few remarks upon the Sponge itself. Bowerbank's censure of Owen has been duly refuted in the above-mentioned article by J. E. Gray; but when Gray unconditionally defines the Sponge described by Quoy & Gaimard as identical with that from the Philippines, I must declare myself opposed to this view, until accurate in-

vestigations of the two forms have proved their identity*. Quoy and Gaimard's species, as is well known, is from the Moluccas, and not from the Philippines. Gray ought therefore, at any rate, to have given this habitat also. However, I do not make this observation in order to preserve a "species," but because I should be sorry to lose Owen's beautiful name *Euplectella aspergillum*, which, in its specific denomination, gives a simple translation of the name "regadera," invented by the people, and therefore certainly better characterizes this animal than the common Latin expression "speciosa," or Gray's English popular name "Venus's Flower-basket."

Würzburg, January 19, 1867.

IV.—*Contributions to the Study of the Entomostraca.*

By GEORGE STEWARDSON BRADY, C.M.Z.S. &c.

[Plates IV. & V.]

UNDER this title I propose to give, from time to time, descriptions of new species and remarks on any other points of interest connected with the Entomostraca which may chance to come under my notice.

No. I. *Ostracoda from the Arctic and Scandinavian Seas.*

The specimens dealt with in the present paper have been derived from mud and sand procured by the captains of whalers from the Arctic seas, and from dredgings made on the coast of Norway by David Robertson, Esq., of Glasgow, to whom, in conjunction with the Rev. H. W. Crosskey, I am indebted for the opportunity of describing the following species.

In the 'Transactions of the Zoological Society' I have already (vol. v. 1865) described several Arctic species which were obtained from Dr. Sutherland's dredgings. But the nomenclature of that memoir requires rectification. I now give an amended list of the species there noticed:—

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| <i>Hunde Islands, Baffin's Bay,</i> 60–70 fathoms. | Cythere limicola (<i>Norman</i>) (= <i>C. areolata</i> , <i>Brady, loc. cit.</i>). |
| Cythere tuberculata (<i>G. O. Sars</i>). | — angulata? (<i>G. O. Sars</i>) |
| — emarginata (<i>G. O. Sars</i>). | (= <i>C. clathrata</i> , <i>var. nuda</i> , <i>Brady, loc. cit.</i>). |
| — costata, <i>Brady</i> . | Cytheridea papillosa, <i>Bosquet</i> . |
| — septentrionalis, <i>Brady</i> . | |

* Dr. Gray, in the 'Proceedings of the Zoological Society' for 1867, has not only acknowledged the distinctness of the species, but has formed of it a second section of the family Euplectelladae. According to him, *Alcyoncellum speciosum* (Q. & G.) constitutes a genus distinct from *E. corbicula*.